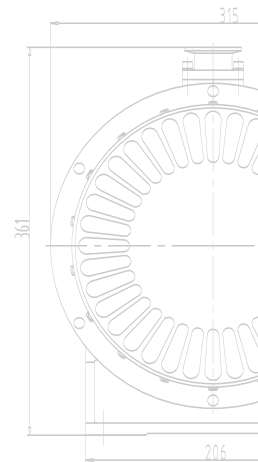
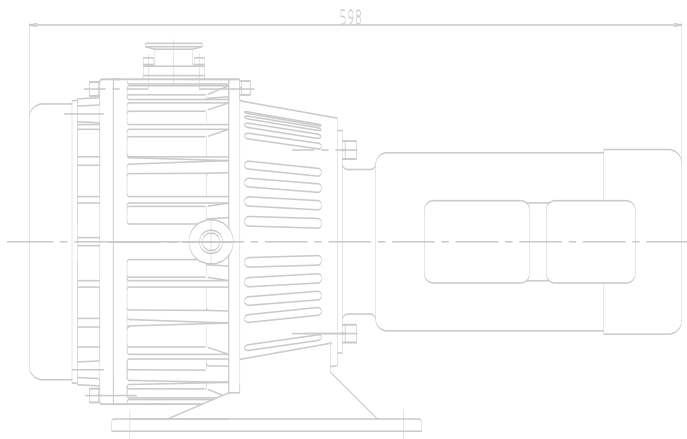


Premium Oil Free Scroll Vacuum Pump Manufacturer



- PLWX Oil free Scroll Vacuum Pump
- PLWXS Oil free Scroll Vacuum Pump
- PLHS Oil free Ultrahigh Vacuum Unit
- PLWXC Oil free Scroll Vacuum Compressor
- PLT Foreline Filter
- PLS Exhaust Silencer
- PLMMK Major Maintenance Kit
- PLTSK Tip Seal Kit

PLWX Oil free Scroll Vacuum Pump



Working principle

PLWX oil free scroll vacuum pump is constructed with a pump head kit, motor kit and racket kit. There are three scroll plates, one orbiting and two fixed. The orbiting scroll plate is offset and orbiting against the two fixed scroll plates with an offset of 180° to form several crescent-shaped pockets of different sizes. By means of a motor driven, the orbiting scroll plate is made to orbit about the fixed scroll plates, reducing the volume of the crescent-shaped pockets and compressing gas from outside towards the inside thereby pumping the gas from vacuum chamber.

Specifications

Model			PLWX 40	PLWX 75	PLWX 150	PLWX 300	PLWX 600	PLWX 800	PLWX 1000	
Pumping Speed	60Hz	cfm	1.3	2.5	5.1	10.9	22.3	31.0	42.8	
		m ³ /h	2.2	4.3	8.6	18.3	37.4	51.8	71.6	
		l/s	0.6	1.2	2.4	5.1	10.4	14.4	20.0	
	50Hz	cfm	1.1	2.1	4.3	9.3	18.7	25.8	35.8	
		m ³ /h	1.8	3.6	7.2	15.5	31.3	43.2	59.8	
		l/s	0.5	1.0	2.0	4.3	8.7	12.0	16.6	
Ultimate Pressure	Torr	≤ 1.1*10 ⁻¹	≤ 6.0*10 ⁻²	≤ 4.5*10 ⁻²	≤ 1.9*10 ⁻²	≤ 7.5*10 ⁻³	≤ 7.5*10 ⁻³	≤ 7.5*10 ⁻³		
	psi	≤ 2.2*10 ⁻³	≤ 1.2*10 ⁻³	≤ 9.0*10 ⁻⁴	≤ 3.8*10 ⁻⁴	≤ 1.5*10 ⁻⁴	≤ 1.5*10 ⁻⁴	≤ 1.5*10 ⁻⁴		
	mbar	≤ 1.5*10 ⁻¹	≤ 8.0*10 ⁻²	≤ 6.0*10 ⁻²	≤ 2.6*10 ⁻²	≤ 1.0*10 ⁻²	≤ 1.0*10 ⁻²	≤ 1.0*10 ⁻²		
	Pa	≤ 15	≤ 8	≤ 6	≤ 2.6	≤ 1	≤ 1	≤ 1		
Noise Level	dB(A)	≤ 54	≤ 57	≤ 57	≤ 63	≤ 63	≤ 65	≤ 67		
Leakage	mbar·l/s	1*10 ⁻⁷								
Max. Inlet/Exhaust Pressure	atm	1/1.3								
Ambient Operation Temp.	°F	41~104								
Motor 1 phase	Power	kW	0.25	0.25	0.25	0.55	0.75	0.75	--	
	Voltage	V	110~115 (60Hz), 200~230 (50Hz)						--	
	Speed	rpm	1725 (60Hz), 1425 (50Hz)						--	
	Plug		North America, Europe, UK/Ireland, India						--	
Motor 3 phase	Power	kW	--	0.37	0.37	0.55	0.75	0.75	1.50	
	Voltage	V	--	200~230 or 460(60Hz), 200~230 or 380~415(50Hz)						
	Speed	rpm	--	1725 (60Hz), 1425 (50Hz)						
Inlet/Exhaust Flange		KF25/KF16				KF40/KF16		KF40/KF16*2		
Dimensions	inch	12.8*8.35*9.97	17.7*10.2*11.7	17.9*10.2*11.7	19.4*11.7*13.2	21.2*12.4*13.7	21.7*12.4*13.7	22.7*13.8*15.8		
	mm	326*212*253	450*260*296	455*260*296	493*297*334	538*315*348	550*315*348	576*450*402		
Weight	lbs	33	46	48	64	79	88	119		
	kg	15	21	22	29	36	40	54		
Cooling Type		Air cooled								
Others		With air flush								

Safety Precautions

The PLWX series oil free scroll vacuum pumps are suitable for clean processes only.

Do not pump toxic, explosive, flammable or corrosive substances or substances which contain chemicals, solvents or particles. PULI will not perform maintenance work on pumps which have used special gases or other hazardous substances.

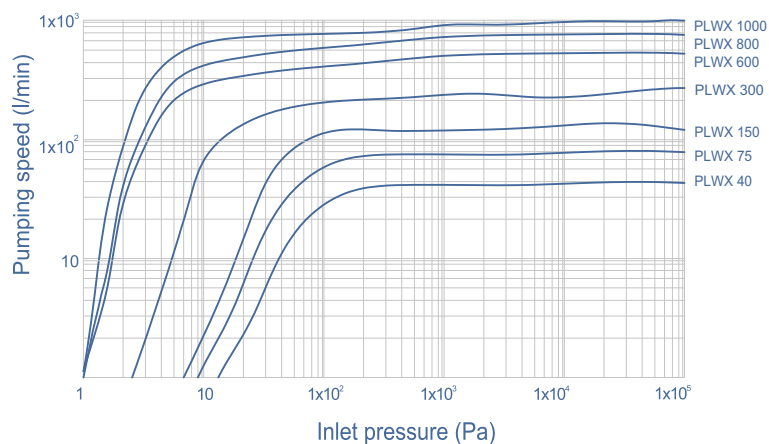
Be sure the inlet gas temperature must be lower than 122°F.

PLWX Oil free Scroll Vacuum Pump

Features & Benefits

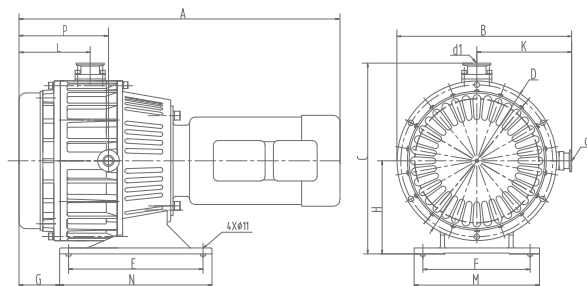
- Pumping speed from 2.2~71.6m³/h
- Suitable for 100~460V, 1 and 3 phase power supply
- Low noise or vibration
- High efficiency, easy maintenance
- No oil contamination of vacuum chamber or environment

Pumping speed-inlet pressure curve under 50Hz



Applications

Instrument	Semiconductor	Coating	Industry	Research & development
Surface analysis	Lithography	FPD (Flat panel display)	Vacuum sterilizer	Nuclear research
Leak detection	Plasma etching	LED / OLED	Vacuum freeze drying	Fusion research
Mass spectrometry	Cryogenics	Hard disk coating	E-beam / laser welding	Plasma research
Electron microscopy	Implantation-source	Photovoltaics	3D metal printing	Accelerator synchrotron
Residual gas analysis	Implantation-beamline	Glass coating (PVD)	Vacuum furnace	Space simulation
Plasma monitoring	Bonding	Blu-ray production (PVD)	Lamp & tube manufacturing	Cryogenic research
Glove box	MBE (Molecular beam epitaxy)	Optical coating (PVD)	Lithium battery dry & packing	Nanotechnology
Inspection	PVD (Physical vapor deposition)	Wear protection coating	Vacuum heat treatment	Biotechnology
Oil free ultrahigh vacuum station	CVD (Chemical vapor deposition)	Web coating	Vacuum packing	Elementary particle physics
	Load lock, transfer chamber	Decoration coating	Vacuum drying	Research & development
			Vacuum degasing	



Dimensions

	A	B	C	D	E	F	G	H	K	L	M	N	P	d1	d2
PLWX 40	326	212	253	185	174	101	61	115	120	87	137	210	103	KF25	KF16
PLWX 75	450	260	296	220	214	119	75	151	135	97	155	250	50	KF25	KF16
PLWX 150	455	260	296	220	214	119	86	151	135	102	155	250	128	KF25	KF16
PLWX 300	493	297	334	262	252	156	85	172	155	114	192	288	147	KF25	KF16
PLWX 600	538	315	348	291	302	160	108	175	175	135	206	338	165	KF40	KF16
PLWX 800	550	315	348	291	302	160	120	175	175	147	206	338	177	KF40	KF16
PLWX 1000	576	450	402	357	267	184	124	195	200	135	224	303	112/65	KF40	KF16*2

PLWXS Oil free Scroll Vacuum Pump



Working principle

PLWXS oil free scroll vacuum pump is constructed with a pump head kit, motor kit and racket kit. There are two scroll plates, one orbiting and the other fixed. The orbiting scroll plate is offset and orbiting against the fixed scroll plates with an offset of 180° to form several crescent-shaped pockets of different sizes. By means of a motor driven, the orbiting scroll plate is made to orbit about the fixed scroll plates, reducing the volume of the crescent-shaped pockets and compressing gas from outside towards the inside thereby pumping the gas from vacuum chamber.

Specifications

Model			PLWXS 75	PLWXS 150	PLWXS 300	PLWXS 500	PLWXS 900
Pumping Speed	60Hz	cfm	2.4	6.8	10.6	17.6	30.0
		m ³ /h	4.2	11.1	18.9	28.8	50.0
		l/s	1.2	3.1	5.3	8.1	13.9
	50Hz	cfm	2.2	5.7	8.8	14.7	24.6
		m ³ /h	3.6	9.4	15.8	24.0	41.6
		l/s	1.0	2.6	4.4	6.7	11.6
Ultimate Pressure		Torr	≤1.1*10 ⁻¹	≤7.5*10 ⁻²	≤6.0*10 ⁻²	≤3.7*10 ⁻²	≤1.5
		psi	≤2.2*10 ⁻³	≤1.5*10 ⁻³	≤1.2*10 ⁻³	≤7.5*10 ⁻⁴	≤2.9*10 ⁻²
		mbar	≤1.5*10 ⁻¹	≤1.0*10 ⁻¹	≤8.0*10 ⁻²	≤5.0*10 ⁻²	≤2.0
		Pa	≤15	≤10	≤8	≤5	≤200
Noise Level		dB(A)	≤57	≤57	≤63	≤63	≤67
Leakage		mbar·l/s	1*10 ⁻⁷				
Max. Inlet/Exhaust Pressure		atm	1/1.3				
Ambient Operation Temp.		°F	41~104				
Motor 1 phase	Power	kW	0.55			--	--
	Voltage	V	110~115 (60Hz), 200~230 (50Hz)			--	--
	Speed	rpm	1725 (60Hz), 1425 (50Hz)			--	--
	Plug		North America, Europe, UK/Ireland, India			--	--
Motor 3 phase	Power	kW	0.55			0.75	1.50
	Voltage	V	200~230 or 460(60Hz), 200~230 or 380~415(50Hz)				
	Speed	rpm	1725 (60Hz), 1425 (50Hz)				
Inlet/Exhaust Flange		KF25/KF16			KF40/KF16		
Dimensions	inch	19.9*10.4*10.8	20.1*10.4*10.8	21.8*12.6*12.2	21.8*12.6*12.2	23.3*12.6*13.6	
	mm	505*265*275	510*265*275	535*320*305	590*320*345	590*320*345	
Weight	lbs	44	48	71	84	91	
	kg	20	22	32	38	41	
Cooling Type		Air cooled					

Safety Precautions

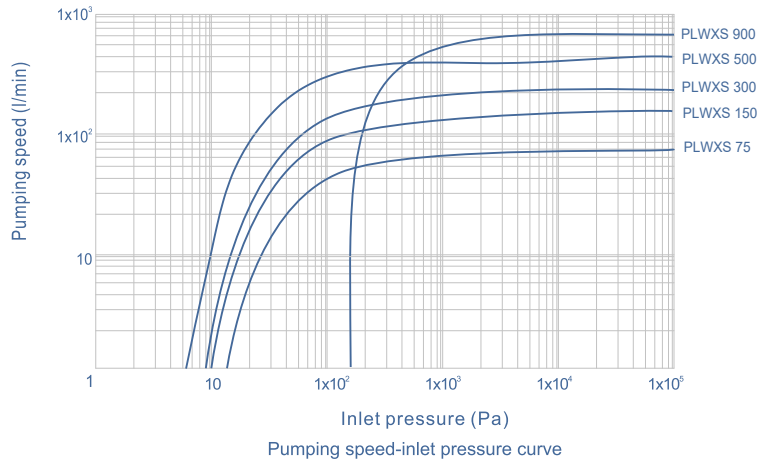
Be sure the inlet gas temperature must be lower than 122 °F.

PLWXS Oil free Scroll Vacuum Pump

Features & Benefits

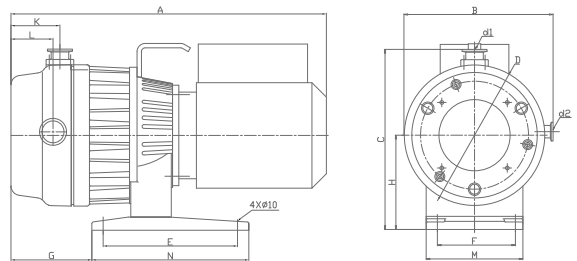
- 100% oil free
- Pumping speed from 4.2~50m³/h
- Suitable for 100~460V, 1 and 3 phase power supply
- Low noise or vibration
- High efficiency, easy maintenance
- No oil contamination of vacuum chamber or environment

Pumping speed-inlet pressure curve under 50Hz



Applications

Instrument	Semiconductor	Coating	Industry	Research & development
Surface analysis	Lithography	FPD (Flat panel display)	Vacuum sterilizer	Nuclear research
Leak detection	Plasma etching	LED / OLED	Vacuum freeze drying	Fusion research
Mass spectrometry	Cryogenics	Hard disk coating	E-beam / Laser welding	Plasma research
Electron microscopy	Implantation-source	Photovoltaics	3D metal printing	Accelerator synchrotron
Residual gas analysis	Implantation-beamline	Glass coating (PVD)	Vacuum furnace	Space simulation
Plasma monitoring	Bonding	Blu-ray production (PVD)	Lamp & tube manufacturing	Cryogenic research
Glove box	MBE (Molecular beam epitaxy)	Optical coating (PVD)	Lithium battery dry & packing	Nanotechnology
Inspection	PVD (Physical vapor deposition)	Wear protection coating	Vacuum heat treatment	Biotechnology
Oil free ultrahigh vacuum station	CVD (Chemical vapor deposition)	Web coating	Vacuum packing	Elementary particle physics
	Load lock, transfer chamber	Decoration coating	Vacuum drying	Research & development
			Vacuum degassing	
			Dental equipment	



Dimensions

	A	B	C	D	E	F	G	H	K	L	M	N	d1	d2
PLWXS 75	505	265	275	225	215	120	125	160	80	65	200	250	KF25	KF16
PLWXS 150	510	265	275	225	215	120	135	145	80	70	155	250	KF25	KF16
PLWXS 300	535	320	305	255	230	160	140	165	95	85	200	270	KF25	KF16
PLWXS 500	590	320	345	300	250	165	125	190	135	85	205	290	KF40	KF16
PLWXS 900	590	320	345	300	250	165	125	190	135	85	205	290	KF40	KF16

PLHS Oil free Ultrahigh Vacuum Station

Constructions

PLHS oil free ultrahigh vacuum station is combined turbo molecular pump, oil free scroll vacuum pump, composite vacuum gauge and measurement hood in an integrated unit for oil free ultrahigh vacuum pumping.

Features & Benefits

- Oil free ultrahigh vacuum pumping combined with turbopump and oil free scroll vacuum pump
- Air cooled and ready for operation
- Compact construction and cost effective
- Integrated control unit



Specifications

Model		PLHS 100/500	PLHS 300/150	PLHS 600/300	PLHS 1200/600	PLHS 1600/1000
Main pump-turbomolecular pump		FJ-110	JT-300	JT-600	JT-1200	JT-1600
Backing pump-scroll pump		PLWX 150	PLWX 150	PLWX 300	PLWX 600	PLWX 1000
Pumping Speed Main pump at 50Hz	l/s	110	300	600	1200	1600
	m ³ /h	3.90*10 ²	1.08*10 ³	1.80*10 ³	4.32*10 ³	5.76*10 ³
	cfm	2.20*10 ²	6.36*10 ²	1.06*10 ³	2.54*10 ³	3.39*10 ³
Pumping Speed Backing pump at 50Hz	l/s	2.0	2.0	4.3	8.7	16.6
	m ³ /h	7.2	7.2	15.5	31.3	59.8
	cfm	4.3	4.3	9.3	18.7	35.8
Ultimate Pressure	Torr	2.87*10 ⁻⁷	1.15*10 ⁻⁷	1.15*10 ⁻⁷	1.15*10 ⁻⁷	1.15*10 ⁻⁷
	psi	7.25*10 ⁻⁹	2.90*10 ⁻⁹	2.90*10 ⁻⁹	2.90*10 ⁻⁹	2.90*10 ⁻⁹
	Pa	5.00*10 ⁻⁵	2.00*10 ⁻⁵	2.00*10 ⁻⁵	2.00*10 ⁻⁵	2.00*10 ⁻⁵
Power Source Type		1 phase / 3 phase, 220V / 380V, 50Hz / 60Hz				
Inlet Flange		CF100/ISO-K100	CF100/ISO-K100	CF150/ISO-K160	CF200/ISO-K200	CF250/ISO-K250
Exhaust Flange		KF16	KF16	KF16	KF16	KF16*2
Noise Level	dB(A)	≤ 57	≤ 57	≤ 63	≤ 63	≤ 67
Dimensions	inch	19.7*20.0*33.1	27.2*20.1*21.7	33.9*30.1*33.5	33.9*30.1*33.5	33.9*30.1*33.5
	mm	500*510*840	690*526*550	860*776*850	860*776*850	860*776*850
Weight	lbs	119	150	342	360	415
	kg	54	68	155	163	188
Ambient Temp	°F	41~104				
Cooling Type		Air cooled				

Applications

Instrument	Semiconductor	Coating	Industry	Research & development
Surface analysis	Lithography	FPD (Flat panel display)	Vacuum sterilizer	Nuclear research
Leak detection	Plasma etching	LED / OLED	Vacuum freeze drying	Fusion research
Mass spectrometry	Cryogenics	Hard disk coating	Electron beam welding	Plasma research
Electron microscopy	Implantation-source	Photovoltaics	Vacuum isolation	Accelerator synchrotron
Residual gas analysis	Implantation-beamline	Glass coating (PVD)	Vacuum furnace	Space simulation
Plasma monitoring	Bonding	Blu-ray production (PVD)	Lamp & tube manufacturing	Cryogenic research
Inspection	MBE (Molecular beam epitaxy)	Optical coating (PVD)	Industry leak detection	Nanotechnology
	PVD (Physical vapor deposition)	Wear protection coating	Heat treatment	Biotechnology
	CVD (Chemical vapor deposition)	Web coating	Vacuum packing	Elementary particle physics
	Load lock, transfer chamber	Decoration coating	Vacuum drying	Research & development

PLWXC Oil free Scroll Vacuum Compressor

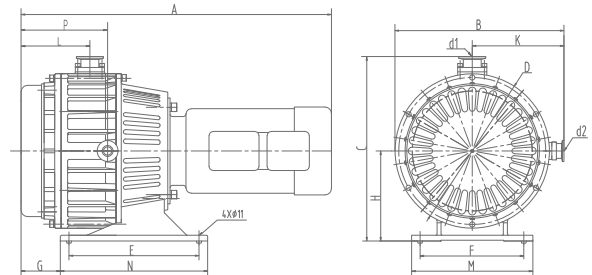


Specifications

Model			PLWXC 75	PLWXC 150	PLWXC 300	PLWXC 600	PLWXC 1000
Pumping Speed	60Hz	m ³ /h	4.3	8.6	18.3	37.4	71.6
		cfm	2.5	5.1	10.9	22.3	42.8
	50Hz	m ³ /h	3.6	7.2	15.5	31.3	59.8
		cfm	2.2	4.3	9.3	18.7	35.8
Ultimate Pressure		mbar	≤3.0*10 ⁻¹	≤3.0*10 ⁻¹	≤2.0*10 ⁻¹	≤1.0*10 ⁻¹	≤1.0*10 ⁻¹
		Torr	≤2.2*10 ⁻¹	≤2.2*10 ⁻¹	≤1.5*10 ⁻¹	≤7.5*10 ⁻¹	≤7.5*10 ⁻¹
Noise Level		dB(A)	≤57	≤57	≤63	≤63	≤67
Max. Inlet/Exhaust Pressure		atm	1/3				
Ambient Operation Temp.		°F	41~104				
Motor 3 phase	Power	kW	0.55	0.55	1.5	2.2	3.0
	Voltage	V	200~230 or 460(60Hz), 200~230 or 380~415(50Hz)				
	Speed	rpm	1725 (60Hz), 1425 (50Hz)				
Inlet/Exhaust Flange			KF25/KF16			KF40/KF16	KF40/KF16*2
Dimensions		inch	17.7*10.2*11.7	17.9*10.2*11.7	21.3*11.7*13.2	22.8*12.4*13.7	25.8*17.7*15.8
		mm	450*260*296	455*260*296	540*297*334	578*315*348	655*450*402
Weight		lbs	46	48	86	117	141
		kg	21	22	39	53	64
Cooling Type			Air cooled				

Applications

SF6 recovery and recirculating
Special gas recovery



Dimensions

	A	B	C	D	E	F	G	H	K	L	M	N	P	d1	d2
PLWXC 75	450	260	296	220	214	119	80	151	135	155	155	250	50	KF25	KF16
PLWXC 150	455	260	296	220	214	119	85	151	135	155	155	250	128	KF25	KF16
PLWXC 300	540	297	334	262	252	156	85	172	155	192	192	288	147	KF25	KF16
PLWXC 600	578	315	348	291	302	160	108	175	175	206	206	338	165	KF40	KF16
PLWXC 1000	655	450	402	357	303	160	115	195	200	206	206	338	120/65	KF40	KF16*2

PLT Foreline Filter

Specifications

Model		ÚŠVÁĎ	ÚŠVÁ€
Operating Pressure	Pa	1~10 ⁵	1~10 ⁵
Efficiency	%	≥99	≥99
Particle Size Filtered	μm	≥2~5	≥2~5
Filter Element		Paper, or polyester	Paper, or polyester
In/Exhaust Flange		KF25/KF25	KF40/KF40
Weight	lbs	2.98	5.41
	kg	1.35	2.45

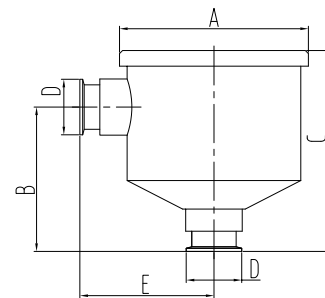


Applications

Coating, pharmaceutical, food, ceramic and glass, vacuum furnace, vacuum packing.

Dimensions

Model		A	B	C	D	E
ÚŠVÁĎ	inch	Ø 5.8	3.8	5.4	KF 25	4.3
	mm	Ø147	96	138	KF 25	109
ÚŠVÁ€	inch	Ø 7.4	5.6	7.8	KF 40	5.2
	mm	Ø187	142	199	KF 40	132



PLS Exhaust Silencer

Specifications

Model		ÚŠSÁ6	ÚŠSÁĎ
Operating Pressure	Pa	1~10 ⁵	1~10 ⁵
Efficiency	%	≥99	≥99
Particle Size Filtered	μm	≥2~5	≥2~5
Filter Element		Paper, or polyester	Paper, or polyester
In/Exhaust Flange		KF16	KF25
Weight	lbs	0.55	0.88
	kg	0.25	0.40

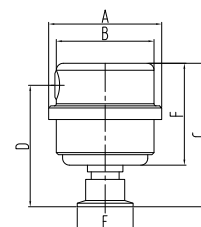


Applications

Coating, pharmaceutical, food, ceramic and glass, vacuum furnace, vacuum packing.

Dimensions

Model		A	B	C	D	E	F
ÚŠSÁ6	inch	Ø 2.5	Ø 2.1	3.7	3.2	KF 16	2.2
	mm	Ø63	Ø53	94	82	KF 16	55
ÚŠSÁĎ	inch	Ø 3.2	Ø 2.8	4.1	3.4	KF 25	2.9
	mm	Ø81	Ø70	103	87	KF 25	74



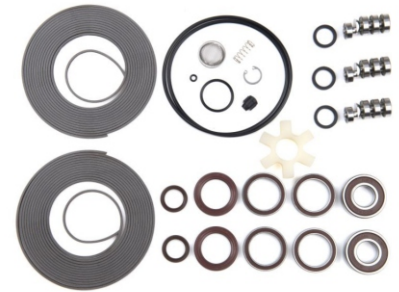
PLT T S T

Specifications

Model	Unit	ÚŠT T SÁ €	ÚŠT T SÁ Ī	ÚŠT T SÁ Ī €	ÚŠT T SÁ Ī €€	ÚŠT T SÁ €€	ÚŠT T SÁ €€€
Working temperature	°F	40 ~ 104					
Working pressure	Pa	$1 \times 10^{-1} \sim 10^6$					
Working life	Hour	8,000 ~ 16,000					
Weight	lbs	0.9	0.9	0.9	1.1	1.1	2.1
	kg	0.4	0.4	0.4	0.5	0.5	0.95
Product suited		ÚŠY YÁ €	ÚŠY YÁ Ī	ÚŠY YÁ Ī €	ÚŠY YÁ Ī €€	ÚŠY YÁ €€	ÚŠY YÁ €€€
			ÚŠY YŌ Ī	ÚŠY YŌ Ī €	ÚŠY YŌ Ī €€	ÚŠY YŌ Ī €€	ÚŠY YŌ Ī €€€

Features & Benefits

- Super wear proof
- High temperature resistance
- Excellent abrasion resistance
- Working life 1~2 year
- Clean and quiet
- Improve limited vacuum
- Decrease noise
- 24 hours per day continues operation



Applications

For the major maintenance of oil free scroll vacuum pumps and oil free scroll vacuum compressors.

PLV Û S V Ā Ū Ā S Ā

Specifications

Model	Unit	ÚŠT S S Ā €	ÚŠT S S Ā 5	ÚŠT S S Ā 50	ÚŠT S S Ā 800	ÚŠT S S Ā 600	ÚŠT S S Ā 1000
Working temperature	°F	40 ~ 104					
Working pressure	Pa	$1 \times 10^{-1} \sim 10^6$					
Working life	Hour	8,000 ~ 16,000					
Weight	lbs	0.2	0.2	0.3	0.3	0.3	0.3
	kg	0.1	0.1	0.15	0.15	0.15	0.15
Product suited		ÚŠY YÁ €	ÚŠY YÁ Ī	ÚŠY YÁ Ī €	ÚŠY YÁ Ī €€	ÚŠY YÁ €€	ÚŠY YÁ €€€
			ÚŠY YŌ Ī	ÚŠY YŌ Ī €	ÚŠY YŌ Ī €€	ÚŠY YŌ Ī €€	ÚŠY YŌ Ī €€€

Features & Benefits

- Super wear proof
- High temperature resistance
- Excellent abrasion resistance
- Working life 1~2 year
- Clean and quiet
- Improve limited vacuum
- Decrease noise
- 24 hours per day continues operation



Applications

For the scheduled maintenance of oil free scroll vacuum pumps and oil free scroll vacuum compressors.

Vacuum Pump Selection Formula

$$T=(V/S) \times 2.303 \times \log(P1/P2)$$

T: exhaust time (s), V: volume (L), S: displacement (l/s), P1: initial pressure (Pa), P2: final pressure (Pa)

Example:

1. 100 liters chamber, within 10 minutes from the atmosphere evacuated to 20Pa, how to do pump selection ?

$S=(V/T) \times 2.303 \times \log(P1/P2)=(100/10) \times 2.303 \times \log(100000/20)=10 \times 2.303 \times 3.699=85(l/min)=1.42(l/s)$, choose vacuum pump of 4l/s.

2. 100 liters chamber, use 8l/s vacuum pump, pumping from atmosphere to 200Pa, how long time will be spent?

$T=(V/S) \times 2.303 \times \log(P1/P2)=(100/8) \times 2.303 \times \log(100000/200)=77s$, need 77 seconds.

Evacuation Time Estimates Empirical Formula

$$T=8V/S$$

V: volume (L), S: displacement (l/s). This formula is suitable for the pressure scale of atmospheric pressure to estimate 133Pa.

Example:

100 liters chamber, with 8l/s vacuum pump, pumping from atmosphere to 133Pa, how long time will be spent?

$T=8V/S$ (empirical formula)= $8 \times 100/8=100s$, need 100 seconds.

Unit Conversion Table of Vacuum Degree

	pa(N/m ²)	bar	mbar	torr (mmHg)	micron (mtorr)	atm	psi (lbf/inch ²)
1 pa=	1	1*10 ⁻⁵	1*10 ⁻²	7.5*10 ⁻³	7.5	9.87*10 ⁻⁶	1.45*10 ⁻⁴
1 bar=	1*10 ⁵	1	1*10 ³	7.5*10 ²	7.5*10 ⁵	9.87*10 ⁻¹	1.45*10 ¹
1 mbar=	1*10 ²	1*10 ⁻³	1	7.5*10 ⁻¹	7.5*10 ²	9.87*10 ⁻⁴	1.45*10 ⁻²
1 torr=	1.33*10 ²	1.33*10 ⁻³	1.33	1	1*10 ⁻³	1.32*10 ⁻³	1.93*10 ⁻²
1 micron=	1.33*10 ⁻¹	1.33*10 ⁻⁶	1.33*10 ⁻³	1*10 ⁻³	1	1.32*10 ⁻⁶	1.93*10 ⁻⁵
1 atm=	1.01*10 ⁵	1.01	1.01*10 ³	7.6*10 ²	7.6*10 ⁵	1	1.47*10 ¹
1 psi=	6.89*10 ³	6.89*10 ⁻²	6.89*10 ¹	5.17*10 ¹	5.17*10 ⁴	6.8*10 ⁻²	1

Unit Conversion of Pumping Speed

	l/s	l/min	m ³ /h	cft/min
1 l/s=	1	60	3.6	2.12
1 l/min=	1.67*10 ⁻²	1	6*10 ⁻²	3.54*10 ⁻²
1 m ³ /h=	2.8*10 ⁻¹	1.67*10 ⁻¹	1	5.9*10 ⁻¹
1 cft/min=	4.7*10 ⁻¹	2.83*10 ⁻¹	1.69	1

Unit Conversion of Conductance & Leakage

	pa*m ³ /s	mbar*l/s	torr*l/s	sccm
1 pa*m ³ /s=	1	10	7.5	5.92*10 ²
1 mbar*l/s=	1*10 ⁻¹	1	7.5*10 ⁻¹	5.92*10
1 torr*l/s=	1.33*10 ⁻²	1.33*10 ⁻²	1	7.89*10
1 sccm=	1.69*10 ⁻²	1.69*10 ⁻³	1.27*10 ⁻³	1

Unit Conversion of Temperature

	K	°C	°F
1 K=	1	°C+273.15	5/9*(°F+459.67)
1°C=	K-273.15	1	5/9*(°F-32)
1°F=	9/5-459.67	9/5 °C+32	1

Unit Conversion of Length

	m	ft	in
1 m=	1	3.28	3.9*10
1 ft=	3.1*10 ⁻¹	1	1.2*10
1 in=	2.5*10 ⁻²	8.3*10 ⁻²	1

Unit Conversion of Weight

	kg	lb	oz
1 kg=	1	2.2	3.5*10
1 lb=	4.5*10 ⁻¹	1	1.6*10
1 oz=	2.8*10 ⁻²	6*10 ⁻²	1

Average free Path of Molecules in 70°F Air under Different Pressures

1 P(torr)=	1	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶	10 ⁻⁹
1 λ(cm)=	4.72*10 ⁻³	4.72	4.72*10	4.72*10 ²	4.72*10 ³	4.72*10 ⁶

Molecular Density at Different Pressures

1 P(torr)=	1	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶	10 ⁻⁹
1 n ₀ (psc/cm)=	4*10 ¹⁶	4*10 ¹³	4*10 ¹²	4*10 ¹¹	4*10 ¹⁰	4*10 ⁷

PROFILE

DONGGUAN PULI SCROLL EQUIPMENT CO.,LTD. is a HI-TECH enterprise dedicating manufacturing of oil free scroll vacuum pumps and compressors.

For over 20 years, we PULI have been providing users and partners with premium quality products that are efficient and dependable. Now we have more than 60 patents and proprietary technologies for oil free scroll vacuum pumps and compressors, and have met multiple international technical standards, including ISO9001 certification, CE and RoHS certification, annual output excess of 10,000. All these helping PULI rank among the top scroll vacuum pump manufacturer in the world.

We believe the integration of high performance and high reliability product and service will bring the highest value to both our customer and ourselves. For this goal, we have contributed our complete effort.

CE RoHS ISO9001 certified manufacturer

100+ intellectual properties

China top sales 10,000+ per year

Users from 60+ countries

OEM/ODM available

Why Choose PULI Oil Free Scroll Vacuum Pump?

PULI is a leading professional manufacturer of oil free scroll vacuum pumps with over 20 years of field experience, longest performance hours and largest sales in China, PULI's oil free scroll vacuum pumps are the premium choice for clean pumping technology.

Oil free scroll vacuum pump, also refer to as vortex pump, scroll pump, dry pump, dry scroll pump, oil free scroll pump, oilless scroll pump, dry scroll vacuum pump, oil free vortex vacuum pump, etc, is perfectly used in semiconductor equipment, photoelectric equipment, materials equipment, medical and food equipment, energy, aerospace, analyzing instruments and vacuum systems, with the advantages of compact structure, small size, light weight and low vibration, low noise, low energy consumption, suitable for global power supply, one button start, can be frequently started and stop between atmospheric pressure and vacuum.

Oil free scroll vacuum pumps are constructed with one or two fixed scroll and orbiting scroll. The orbiting scroll is driven by motor through an eccentric shaft driven by electric motor. The movement of the orbiting scroll, meshed with the fixed scroll, forms successive crescent shaped volumes in the pump body. Gas which enters the pump through the inlet is compressed by the movement of the orbiting scroll and swept towards the center of the fixed scroll. The compressed gas enters the exhaust port near the center of the fixed scroll and is exhausted from the pump through the exhaust port as shown below:



0°(360°) gas suction



90° gas pressing



180° further compressing

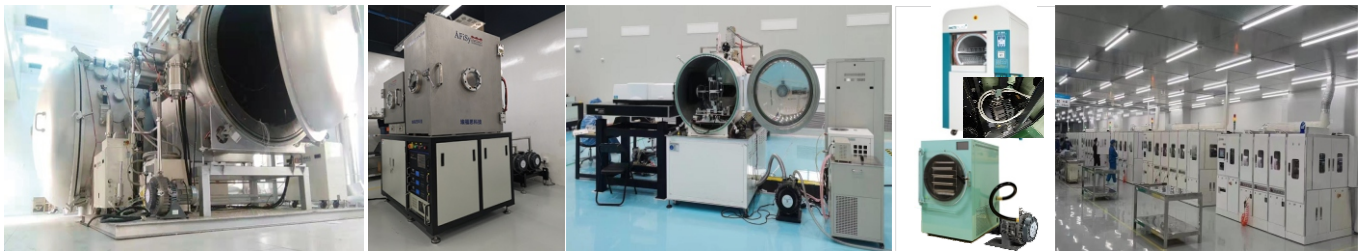


270° discharging

QUALITY CONTROL



APPLICATION



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